



4910-06-P

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

Safety Advisory 2013-01; Passing Stop Signals Protecting Movable Bridges

AGENCY: Federal Railroad Administration (FRA), Department of Transportation (DOT).

ACTION: Notice of Safety Advisory.

SUMMARY: FRA is issuing Safety Advisory 2013-01 to remind track owners, railroads, and their employees of the importance of ensuring that rails are properly aligned and movable spans are secured before permitting a train to pass a signal that is displaying a stop indication and protecting a movable bridge. FRA is issuing this notice in response to a recent train accident involving a derailment in which there was an unsecured swing span that moved laterally during the passage of a train. This notice recommends that track owners and railroads (1) evaluate the design and construction of existing movable bridges to determine if effective span locking is being provided; (2) review current operating rules and procedures to ensure that these instructions adequately protect movable bridges during the operation of trains; and (3) ensure that employees authorized to determine whether movable bridges are correctly aligned and secured are adequately trained to perform these duties.

FOR FURTHER INFORMATION CONTACT: Carlo M. Patrick, Staff Director, Rail and Infrastructure Integrity Division, Office of Railroad Safety, FRA, 1200 New Jersey Avenue, SE., Washington, DC 20590, telephone (202) 493-6399; David R. Killingbeck, Chief Engineer - Structures, Rail and Infrastructure Integrity Division, Office of Railroad

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SUPPLEMENTARY INFORMATION:

Background

On November 30, 2012, a Consolidated Rail Corporation mixed freight train with two locomotives and 82 freight cars, including 51 hazardous materials tank cars, derailed seven cars while crossing a single-leaf movable swing bridge. The derailed cars included loaded tank cars of vinyl chloride and ethanol. One vinyl chloride tank car was breached, resulting in the release of its contents into a waterway and the atmosphere, as well as in the subsequent evacuation of approximately 600 nearby residents.

Due to the typically limited train traffic over the bridge, it was normally left in an open position when not needed in order to allow pleasure craft to pass. Upon arriving at the bridge, a train crew would normally encounter a stop signal and the bridge in the fully-open position, oriented approximately perpendicular to the track. As such, once stopped at the signal, the train crew normally would request the bridge to close using the key pad on the locomotive radio. Through the use of a programmable logic controller, an automated sequence would commence closing and seating the bridge and then moving the slide lock rails into the locked position. Once the slide lock rails were fully engaged, a signal to proceed would be displayed.

Following the derailment, the swinging end of the movable span was found to be laterally displaced approximately three feet. Although FRA's investigation of this accident is ongoing, and the probable causes and contributing factors have not yet been

established, preliminary indications are that the movable span was not locked in place and moved or rotated laterally during the passage of the train. Unlike most swing bridges that possess end wedges that when driven, prevent rotation of the span, the subject bridge was a rare, shear-pole swing span that had neither end wedges nor span locks. The slide rails that were part of the movable bridge rail joints provided the only means of securing the span from rotating.

RECOMMENDED ACTION: In light of the above discussion, FRA recommends that track owners and railroads:

1. Evaluate the design of existing movable bridges, especially swing bridges, to determine if effective span locking, independent of rail locking, is being provided as recommended in Chapter 15 (Steel Structures) of the current American Railway Engineering and Maintenance-of-Way Association Manual for Railway Engineering.
2. Evaluate operating rules and procedures that permit the operation of trains past a stop signal protecting a movable bridge to ensure their adequacy to prevent operation of trains should the bridge not be properly aligned and secured.
3. Review the adequacy of all training given to employees authorized to determine that a movable bridge is properly aligned and locked to ensure that employees are capable of correctly determining that the movable bridge is safe for train movements.

FRA encourages track owners and railroads to take actions that are consistent with the preceding recommendations and to take other actions to help ensure the safety of the Nation's railroads, their employees, and the general public. FRA may modify this

Safety Advisory 2013-01, issue additional safety advisories, or take other appropriate actions it deems necessary to ensure the highest level of safety on the Nation's railroads, including pursuing other corrective measures under its rail safety authority.

Issued in Washington, DC, on February 22, 2013.

Jo Strang
Associate Administrator for Railroad Safety/Chief Safety Officer

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